



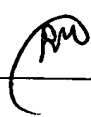
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,477	01/06/2004	Dong Jae You	041993-5363	3545
9629	7590	01/18/2006	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			CHEN, WEN YING PATTY	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/751,477	Applicant(s) YOU, DONG JAE 	
	Examiner Wen-Ying P. Chen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed Dec. 2, 2005 has been received and entered. Claims 17-20 are newly added per the Amendment filed. Therefore, claims 1-20 are now pending in the current application.

Claim Objections

Claims 19 and 20 are objected to because of the following informalities: Claims 19 and 20 are depending on claim 20, in which the Examiner believes it's a typo. Claims 19 and 20 are treated to be depending on claim 18, as discussed in Page 10 of the Remarks. Appropriate correction is required.

Claim Rejections - 35 USC § 102

Claims 1-4, 6, 11-12, 16 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Furuwari et al. (JP 11-142841).

With respect to claim 1 (Amended): Furuwari et al. disclose in Figure 1 a liquid crystal display device comprising:

- a liquid crystal display panel (element 9);
- a backlight unit having a fluorescent lamp (element 4), a reflection sheet (element 2) substantially enclosing the fluorescent lamp to reflect light emitted from the fluorescent lamp, and a bottom cover (element 6) having an end portion that wraps around the reflection sheet to

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support the reflection sheet (wherein the bottom cover is formed to overlap two adjacent sides of the reflection sheet, therefore, is considered to be wrapping around the reflection sheet); and

a metal chassis (element 10) supporting and affixing the liquid crystal display panel and the backlight unit.

As to claim 2 (Amended): Furuwari et al. further disclose in Figure 1 that the backlight unit comprises:

a panel-type light guide plate (element 5) having a light projection plane and a light incident plane;

a reflection plate (element 3) along a rear side of the light guide plate;

a lamp assembly at the light incident plane of the light guide plate, the lamp assembly including the fluorescent lamp (element 4) and the reflection sheet (element 2) at an outer side of fluorescent lamp;

at least one optical sheet (element 8) over the light projection plane of the light guide plate; and

a rectangular mold frame (element 7) receiving the reflection plate, the light guide plate, the optical sheet, and the lamp assembly therein;

wherein the bottom cover (element 6) extends from a bottom of the mold frame to an outer side of the reflection sheet.

As to claim 3: Furuwari et al. further disclose in Figure 1 that the reflection sheet (element 2) encloses an outer side of the fluorescent lamp except for a light exit portion of the fluorescent lamp and overlaps a portion of the light guide plate.

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As to claim 4: Furuwari et al. further disclose in Figure 1 that the reflection sheet (element 2) has a round shape and end portions of the reflection sheet overlaps a portion of the light guide plate by a first overlap amount.

As to claim 6: Furuwari et al. further disclose in Paragraph 0005 that the reflection sheet is formed of polyethylene terephthalate (PET).

With respect to claim 11 (Amended): Furuwari et al. disclose in Figure 1 a liquid crystal display device comprising:

- a panel-type light guide plate (element 5) having a light projection plane and a light incident plane;

- a reflection plate (element 3) along a rear side of the light guide plate;

- a lamp assembly at the light incident plane of the light guide plate, the lamp assembly including the fluorescent lamp (element 4) and the reflection sheet (element 2) at an outer side of fluorescent lamp;

- a liquid crystal display panel (element 9);

- at least one optical sheet (element 8) over the light projection plane of the light guide plate; and

- a bottom cover (element 6) extending from a rear side of the reflection plate to an outer side of the reflection sheet such that an end portion of the bottom cover extending to the outer side of the reflection sheet wraps around the reflection sheet (wherein the bottom cover is formed to overlap two adjacent sides of the reflection sheet, therefore, is considered to be wrapping around the reflection sheet).

As to claim 12: Furuwari et al. further disclose in Paragraph 0005 that the reflection sheet is formed of polyethylene terephthalate (PET).

As to claim 16: Furuwari et al. further disclose in Figure 1 that the reflection sheet (element 2) encloses an outer side of the fluorescent lamp (element 4) except for a light exit portion of the fluorescent lamp.

With respect to claim 18 (New): Furuwari et al. disclose in Figure 1 a liquid crystal display device comprising:

- a light guide plate (element 5);
- a reflection plate (element 3) along a rear side of the light guide plate;
- a fluorescent lamp (element 4) along an outer periphery of the light guide plate;
- a reflection sheet (element 2) substantially enclosing the fluorescent lamp along the outer periphery of the light guide plate to reflect light from the fluorescent lamp to the light guide plate; and
- a bottom cover (element 6) along a rear side of the reflection plate having an end portion that wraps around the reflection sheet (wherein the bottom cover is formed to overlap two adjacent sides of the reflection sheet, therefore, is considered to be wrapping around the reflection sheet).

As to claim 19 (New): Furuwari et al. further disclose in Figure 1 that a first end portion of the reflection sheet (element 2) overlaps a portion of the reflection plate (element 3) and a second end portion of the reflection sheet overlaps a portion of the light guide plate (element 5).

Claim Rejections - 35 USC § 103

Claims 5, 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuwari et al. (JP 11-142841) in view of Shiotani et al (JP 2001/338512A).

With respect to claim 5: Furuwari et al. disclose all of the limitations of the liquid crystal display device set forth in the previous claims, but fail to specifically disclose that the first overlap amount is within a range of about 0.2mm to about 30mm.

However, Shiotani et al. in Figure 5 disclose a reflection sheet (element 8) overlapping the light guide plate (element 5) with an overlapping portion (element 21a) by an amount of 0.5mm (element w; column 11, line 4), which is in the specified range of between 0.2mm and 30mm.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to construct a liquid crystal display device as taught by Furuwari et al. wherein the first overlapping amount is as taught by Shiotani et al., since Shiotani et al. teach that the overlapping amount determines the effective light-emitting dimension and the unused section of the light-emitting surface of the light guide plate (Column 2, lines 43-50).

As to claim 10: Furuwari et al. disclose all of the limitations of the liquid crystal display device set forth in the previous claims, but fail to specifically disclose that the space between the end portion of the bottom cover and the light guide plate is within a range of about 0.1mm to about 50mm.

However, Shiotani et al. in Figure 5 disclose a bottom cover (element 3) with a space (element C) between the light guide plate (element 5) of an amount of 0.1mm (Column 11, line 3), which is in the specified range of between 0.1mm and 50mm.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to produce a liquid crystal display device according to Furuwari et al. with the specified spacing dimension taught by Shiotani et al. so that the light leakage amount can be controlled with the gap dimensions.

As to claim 17 (New): Furuwari et al. disclose all of the limitations set forth in claim 11, but fail to specifically disclose that the first overlap amount is within a range of about 0.2mm to about 30mm and that the space between an end portion of the bottom cover and the light guide plate is within a range of about 0.1mm to about 50mm.

However, Shiotani et al. in Figure 5 disclose a reflection sheet (element 8) overlapping the light guide plate (element 5) with an overlapping portion (element 21a) by an amount of 0.5mm (element w; column 11, line 4), which is in the specified range of between 0.2mm and 30mm and a bottom cover (element 3) with a space (element C) between the light guide plate (element 5) of an amount of 0.1mm (Column 11, line 3), which is in the specified range of between 0.1mm and 50mm.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to construct a liquid crystal display device as taught by Furuwari et al. wherein the first overlapping amount and the specified spacing are as taught by Shiotani et al., since Shiotani et al. teach that the overlapping amount determines the effective light-emitting dimension and the unused section of the light-emitting surface of the light guide plate (Column 2, lines 43-50) and that the light leakage amount can be controlled with the gap dimensions of the spacing of the bottom cover.

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Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuwari et al. (JP 11-142841) in view of Nakano (US 2003/0053008A1).

Furuwari et al. disclose all of the limitations of the liquid crystal display device set forth in the previous claims, but fail to disclose that the reflection sheet is formed of one of a synthetic resin including one of a polymer having a high reflexivity and Ti.

However, Nakano discloses in Paragraph 0036 and Figure 1 a reflection sheet (element 2) formed of one of a synthetic resin, which includes one of a polymer having a high reflexivity and Ti.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to make the reflection sheet for the liquid crystal display device disclosed by Furuwari et al. with the reflection sheet composition disclosed by Nakano, since the use of a polymer having a high reflexivity and Ti, especially the white titanium, exhibits a strong effect to improve the concealing property (Page 3, paragraph 0036).

Claims 8, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuwari et al. (JP 11-142841) in view of Matsuda et al. (US 2002/0167626A1).

Furuwari et al. disclose all of the limitations of the liquid crystal display device set forth in the previous claims, but fail to disclose that the reflection sheet being formed by an extension of the reflection plate.

However, Matsuda et al. disclose in Figure 9 a reflection sheet (element 10) formed from the extension of the reflection plate (element 10).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the single element structure of the reflection sheet/plate disclose by Matsuda et al. in the display device disclosed by Furuwari et al. so that the thickness of the LCD device would be thinner by reducing two reflection layers to one single reflection layer, as taught by Matsuda et al. (Paragraph 0112).

Claims 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuwari et al. (JP 11-142841) in view of Lee et al. (US 2001/0003471).

Furuwari et al. disclose all of the limitations set forth in the previous claims, but fail to disclose that the bottom cover has an end portion having a round shape.

However, Lee et al. disclose in Figure 18 a backlight module comprising of a bottom cover (element 1650) having an end portion of a round shape.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a liquid crystal display device as taught by Furuwari et al. wherein the bottom cover of the backlight module has an end portion having a round shape as taught by Lee et al., since Lee et al. teach that the shape of the bottom cover better couples the light source thus helps to prevent distortion due to external impact and vibration (Paragraph 0119).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuwari et al. (JP 11-142841) and Shiotani et al. (JP 2001/338512A) in view of Nakano (US 2003/0053008A1).

Furuwari et al. and Shiotani et al. disclose all of the limitations set forth in claim 12, but they did fail to disclose that the reflection sheet is formed of one of a synthetic resin including one of a polymer having a high reflexivity and Ti.

However, Nakano discloses in Paragraph 0036 and Figure 1 a reflection sheet (element 2) formed of one of a synthetic resin, which includes one of a polymer having a high reflexivity and Ti.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to make the reflection sheet for the liquid crystal display device disclosed by Furuwari et al. and Shiotani et al with the reflection sheet composition disclosed by Nakano, since the use of a polymer having a high reflexivity and Ti, especially the white titanium, exhibits a strong effect to improve the concealing property (Page 3, paragraph 0036).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuwari et al. (JP 11-142841) and Shiotani et al. (JP 2001/338512A) in view of Matsuda et al (US 2002/0167626A1).

Furuwari et al. and Shiotani et al. disclose all of the limitations of the liquid crystal display device set forth in claim 11, but fail to disclose that the reflection sheet being formed by an extension of the reflection plate.

However, Matsuda et al. disclose in Figure 9 a reflection sheet (element 10) formed from the extension of the reflection plate (element 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the single element structure of the reflection sheet/plate disclose by

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Matsuda et al. in the display device disclosed by Furuwari et al. and Shiotani et al. so that the thickness of the LCD device would be thinner by reducing two reflection layers to one single reflection layer, as taught by Matsuda et al. (Paragraph 0112).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuwari et al. (JP 11-142841) and Shiotani et al (JP 2001/338512A) in view of Lee et al. (US 2001/0003471).

Furuwari et al. and Shiotani et al. disclose all of the limitations set forth in claim 11, but fail to disclose that the bottom cover has an end portion having a round shape.

However, Lee et al. disclose in Figure 18 a backlight module comprising of a bottom cover (element 1650) having an end portion of a round shape.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a liquid crystal display device as taught by Furuwari et al. wherein the bottom cover of the backlight module has an end portion having a round shape as taught by Lee et al., since Lee et al. teach that the shape of the bottom cover better couples the light source thus helps to prevent distortion due to external impact and vibration (Paragraph 0119).

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Ying P. Chen whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.

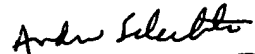
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Wen-Ying P Chen
Examiner
Art Unit 2871

WPC
1/09/06


ANDREW SCHECHTER
PRIMARY EXAMINER